CERTIFICATE OF ANALYSIS

PRODUCT NAME:	SIALIDASE S™ (His-tagged, recombinant from *Streptococcus pneumoniae* expressed in *E. coli*)
PRODUCT CODE:	GK80021
LOT NUMBER:	163 002-1
FORMULATION:	20 m*M* Tris-HCl, 25 m*M* NaCl (pH 7.5) upon reconstitution as indicated
RECONSTITUTION:	Dissolve the lyophilizate in 645 µl of ultrapure water to obtain the described formulation.
SUGGESTIONS FOR USE:	Up to ~1 nanomole of substrate can be cleaved in a 20 µl reaction volume. In the standard reaction use: 4 µl of 5x Reaction Buffer B, substrate and water in a combined volume of 14 µl, and 2 µl of Sialidase S. Incubate for one hour at 37°C. To cleave more than one nanomole of substrate, increase the reaction volume and enzyme proportionally. Difficult substrates may require optimization to find the correct amount of Sialidase S to add.
STORAGE:	-20°C until redissolved. Store redissolved enzyme at 2 – 8°C for up to 2 months.
PACK SIZE:	3 Units (equivalent to 1 Unit of previous product GK80020)

COMPONENTS

Component	Quantity/Pack	Lot No.	Exp. Date
GK80021 Sialidase S (3 Units)	1 each	163 002	Mar 2018*
WS0049 5x Reaction Buffer (1 ml) [250 m*M* Sodium Phosphate, pH 6.0]	1 each	W160035	Mar 2020

*Extended from prior exp. date based on re-assay

QUALITY CONTROL:

1) Enzyme Specific Activity[1]:	Pass	(Specification: ≥30 U/mg)
2) Protease Assay[2]:	Pass	(Specification: "Not Detectable")
3) Contaminants[3]	Pass	(Specification: ≤0.001%)

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Date: 2017.04.05 18:01:28 -07'00'

Authorized Signature

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1. One unit is defined as the amount of enzyme required to catalyze the release of 1 μmole of p-nitrophenol from pNP-α-d-N-acetylneuraminic acid per minute at pH 5.5 and 37°C.

2. No protease activity was detectable after incubation of the enzyme with 0.2 mg resorufin-labeled casein for ~18 hours at 37°C based on Schickaneder E, Hösel W, von der Eltz H, Geuß U. Casein-resorufin, a new substrate for a highly sensitive protease assay. Fresenius Z. Anal Chem. 1988 330:360.

3. The absence of exoglycosidase contaminants was confirmed by extended incubations with the corresponding pNP-glycosides: α-fucosidase, β-fucosidase, α-mannosidase, β-mannosidase, β-N-acetylhexosaminidase, α-N-acetylgalactosaminidase, α-galactosidase, β-galactosidase, α-glucosidase, β-glucosidase and β-xylosidase.

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